**RESEARCH AND OPENGREEN DEVELOPMENT** 

# PRESENTATION TRIALS Season SPRING SUMMER 2016

Fiumicino – 25-26 January 2017



TEST 1 - Influence of a mixture based on Regortek and Biosprint on the productivity and size of "early potato"

**OBJECTIVE OF THE TEST** : Test the influence of REGORTEK and BIOSPRINT on RESET and CALIBRAL UNIFORMITY

**CONDUCTS TEST on ACTRICE and EL MUNDO varieties** 

SOWING : 3 march 2016 (60.000 tubers/hectare)

=>

#### HARVESTING: 4 July 2016

FEE => 5000mq



#### **TREATMENT carried out by foliar way as follows:**

Treatment date	Dose REGORTEK	Dose BIOSPRINT
10/06/2016	250g /hl	200g / hl
15/06/2016	250g /hl	200g / hl

#### **OBSERVET RESULTS**

In both varieties tested, an increase in productivity of 15% was observed, but the data that we consider most significant is that relative to the uniformity and diameter of the gauge, as shown in the following photos:





Fig 1. var. ACTRICE (treaty)



Fig.2 var. ACTRICE (untreated)







Fig.2 var. ELMUNDO (untreated)



Fig 1. var. ELMUNDO (treaty)



Detail of the size differences between treaty - not treaty





Detail of the size differences between treaty - not treaty





In parallel test conducted on aubergine the results were similar



TEST 2 - The action of REGORTEK by radical way on the attitute to the increase of fruit set and production of the watermelon

**OBJECTIVE OF THE TEST**: Highlight the capacity of the REGORTEK bioinducer in solving problems related to poor setting on baby watermelon crops.

#### CONDUCT TESTS ON NINJA VARIETIES

Transplant (under small sixth tunnel 2x1.60) : 10 april 2016 => HARVESTING: 12 July 2016

LAND => 10.000mq (total cultivation 25 hectares)=> 3.100 plants for hectare



**TREATMENT performed by radical means as follows:** 

DATE TREATMENT	Dose REGORTEK
15/06/2016	2,5 kg / hectare
25/06/2016	2,5 kg / hectare

OBSERVED RESULTS: the test in question was intentionally conducted in an extreme situation characterized by poor fruit setting and abortion due to important thermal imbalances: field surveys and field yields analysis showed positive results both in terms of setting and yield





Situation BEFORE TREATMENT: poor fruit setting and thinness





Aborted fruits

Situation BEFORE TREATMENT: few flowers present

(reliefs at June 13th)







Situation AFTER TREATMENT (7 days): elongation of jets, flowering and fruit set.

#### Situation AFTER TREATMENT (7 days): particular attached frutis





Situation AFTER the SECOND TREATMENT (after 10 days from the first): UP TO 12 fruits for plant





ANALYSIS OF RESE: (collection 12 July 2016)





## TEST 3 - Influence of the combined use of the BIOSPRINT bioinducer in fertigation and of the biostimulant SEAGEL by foliar way on the uniformity of tomato production

**TEST OBJECTIVE**: COMBINED TEST – Test the use of BIOSPRINT by radical way and by SEAGEL by foliar way on the uniformity of production of the TOMATO (understood as uniformity of caliber and coloring).

Out of soil test (rock wool)=> "PRAETORIUS F1" variety -density 2.5 plants/sqm; the transplant was carried out on April 15, 2016 with start of collections starting from June 25, 2016.

Full field test => variety "ACHIKO F1" - density 23.000 plants /hectare; transplant carried out on 30 April 2016 with collections starting from 12 July 2016.



#### **TREATMENTS PERFORMED:**

Dose BIOSPRINT	Dose SEAGEL		
OBåå^åÁ§IÁo@∘ÁÙÞÁå`^Á&[ÁÁFÁµÓÁ[¦Á F€ÉEEE•`{ÁÁsceå{ã}ãrc^¦^åÁ§IÁHEÁ []^¦æeā[}•Á[}ÁÁ΀Áåæê•Á&î&]^	Ó  ^æÁå[●^Á 100ml/hl 4 cą̃ ^● [~60ggÁ& & ^		
Dose BIOSPRINT	Dose SEAGEL		

#### <= OUTSIDE SOIL (in protected cultivation)

<= FULL FIELD



#### **OBSERVED RESULTS : TEST OUT OF SOIL**



Detail of the color change to the first one Stage after 3 days from treatment with SEAGEL





#### **OBSERVED RESULTS : GROUND TEST (Uniformity of coloring)**







UNTREATED

TREATY

#### **OBSERVED RESULTS : TEST FULL FIELD (Uniformity of coloring)**



UNTREATED



TREATY



## TEST 4 - Influence of biostimulant SERENITY on radication and consequent "starter" effect in the wild rocket in protected culture

**OBJECTIVE OF THE TEST** : to test the use of serenity administered by radical (PHASE 1) and by leaf (PHASE 2) on the starter effect and relative harvesting precocity.

The test was conducted on a greenhouse parcel extended for 1.000 mq - sowing was carried out on October 18, 2016 with pneumatic seed drill at a dose of 5 Kg/hectare of seed.



In detail the fertilizations (both radical and foliar) performed were carried out according to the following scheme:

=ntervent]cb <sup>-</sup> XUhY	Dose SERENITY		
18/10/2016	300 ml / 1000 mq		

<= First Intervention carried out in fertigation "AT SOWING"

=ntervenh]cb <sup>-</sup> XUhY	Dose SERENITY	
24/10/2016	200 ml / 100 lit^¦∙ [ -Á́, æe^¦	

<= Second Intervention carried out by foliar route "TO THE COTYLEDONATE STAGE"



#### **OBSERVED RESULTS : DIMENSION after 10 days from SOWING**



UNTREATED



TREATY

Remarkable differences also at chromatic intensity level



#### **OBSERVED RESULTS : DIMENSION after 16 days from SOWING**





#### UNTREATED

TREATY

The first cut in the treaty took place on 21 November; 7 days before the untreated In the subsequent cuts this advance will allow the recovery of a cut.



**Internal test results analysis** 



**OBJECTIVE of the TEST** : to test the efficacy of the bioactivated BIOGEO M on the control of Elaters in potato cultivation.

The test was conducted on UNIVERSA variety potato seeded of March 22, 2016.

The action of the bioactivate is due to the funges Metarhizium anisopliae which preferring protein and chitinic substances (present on the exoskeleton of insects) is able to develop producing spores at high concentrations which in turn are capable of germinating on bodies of other insects (among which Elateridi).



#### The test has been set as follows:



#### **THESIS 1 => WITNESS (no treatment)**

THESIS 2 => BIO GEO M dose 30kg/hectare

THESIS 3 => BIO GEO M dose 30kg/hectare + CRUISER (Thiamethoxam) 0,3 l/hectare THESIS 4 => MOCAP (Etoprofos) 20kg/hectare + CRUISER (Thiamethoxam) 0,3 l/hectare



#### **OBSERVED RESULTS : Analysis of efficacy (%)**

		А	В	С	D	AVERAGE	EFF. (%)
THESIS 1	DITCH	8	3	10	16	9 7E	
WITNESS	HALF	6	14	4	9	0,75	-
BIO	THESIS 2 GEO M 30kg/ha	1	3	1	5	2,50	71,43
BIOGEO M 30	THESIS 3 0kg/ha + CRUISER 0,3 l/ha	2	1	0	5	2,00	77,14
MOCAP 20k	THESIS 4 g/ha + CRUISER 0,3 l/ha	0	0	1	0	0,25	97,14





## FOCUS – The control of RMA in the agri-food sector: The Requests of the G.D.O.

The main players in the large-scale retail trade, both italian and european. have standardized supply specifications demanding ever-stricter supply chain restrictions



... the RESTRICTIONS concern => REDUCTION to the 30% or 50% of the RMA of law => IMPOSITION of maximum number of molecules found (max 4 o 5)

=> Exclusion of certain active ingredients as they are included in black list (see IMIDACLOPRID, FOSETIL AI, ecc.)



#### The objective problems...

Despite the good behavior of the farmer in choosing times, doses and modalities of the interventions Phytosanitary in full compliance with the times of deficiency can happen that some molecules during the cycle crop (especially in the short cycles typical of leafy vegetables) do not degrade completely by behaving samples outside or out of standard subject to dispute and in extreme cases suspension of supplies.

This is most often caused by environmental factors such as :

- => Low temperatures
- => Low light
- => Cultivation in protected crops

=> Soil poor in telluric microflora that aids degradation (this condition is typical of soils in which geodisinfestation has been carried out at the start of cultivation cycles).

### ... THE ANSWER OF OPENGREEN...



### **FITOSTOP**

It is bioactivates amendant which enough the development of suitable lyevitive molds such as Aureobasidium pullulans and attinomiceti which Streptomyces lyducus.

This microflora developing externally on the aerial part as well as competing with the pathogenic microflora promoting plant growth and degrading the phytopharmaceutical molecules.



# TEST 5 - Influence of bioactivated FITOSTOP on the degradation of some active ingredients used in agriculture

Objective of the test : to test the efficacy of the FITOSTOP on the degradation of a chemical molecule having a fungicidal and insecticidal function on the cultivation of the peripita abate pear tree.

The test was carried out at the end of summer 2016 by foliar treatment at a dose of 2 Kg/hectare 7 days before the presumed collection date.







## **OBSERVED RESULTS :**

A multiresidual analysis was carried out commissioning the Modena NEOTRON SpA in order to test the extent of the degradation:

	Neat-dir/008/86 ed.8 01/07/20
Coctroo	OS-feedmonitoring   OS-residuemonitoring   OS-Labor für Frisches Obst.   Gemüse und Kartoffeln.   OS-Labor für Futtermittel.
ANALYTICAL AND TECHNICAL SERVICES	Modena (Italy), li 07/10/2016 Pagina 1 di 2 COMMITTENTE OPEN GREEN SrI Via Arti e Mestieri, 8 26030 GADESCO PIEVE DELMONA CR
RAPPORTO DI PROVA nº 16M07325-lt-0	CAMPIONE 16M07325
	Data Inizio Analisi 12/09/2016
Descrizione dichiarata: PERA "NON TRATTATO" - DATA ARRIVO ( COMMITTENTE, TRASPORTO EFFETTUATO DA: COMMITTENTE Stato all'arrivo in Laboratorio: temperatura ambiente	CAMPIONE 12/09/2016, CAMPIONAMENTO ESEGUITO DA: E.

as pnosphorous acid			
Abamectin	< LQ		
Acetamiprid	0,022	± 0,	
- Limite (Reg. CE 396/2005 e s.m.i.): mg/kg 0,8			176
Boscalid	0,034	$\pm 0,$	
- Limite (Reg. CE 396/2005 e s.m.i.): mg/kg 1,5			
Captan	0,017	$\pm 0,$	OTENOREEN
Chlorantraniliprole (DPX E-2Y45)	< LQ		STECIFIC FERTILIZERS







LAB N°0026 Signatory of EA, IAF and ILAC Mutual Recognition Agreements

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COMMITTENTE

OPEN GREEN Srl Via Arti e Mestieri, 8 26030 GADESCO PIEVE DELMONA CR

Modena (Italy), li 06/10/2016

Data Inizio Analisi 12/09/2016

#### RAPPORTO DI PROVA nº 16M07324-lt-0

CAMPIONE	16M07324

## Descrizione dichiarata PERA "TRATTATO - DATA ARRIVO CAMPIONE 12/09/2016, CAMPIONAMENTO ESEGUITO DA: COMMITTENTE, TRASPORTO EFFEITUATO DA: COMMITTENTE. Stato all'arrivo in Laboratorio: temperatura ambiente

Abamectin	< LQ	mg/kg	0,010
Acetamiprid	<lq(0,008)< td=""><td>mg/kg</td><td>0,010</td></lq(0,008)<>	mg/kg	0,010
Boscalid	<lq(0,009)< td=""><td>mg/kg</td><td>0,010</td></lq(0,009)<>	mg/kg	0,010
Captan	< LQ	mg/kg	0,010
Chlorentranilinrale (DDV E 2V45)	-10	mg/kg	0,010

**REDUCTION of Acetamiprid and Boscalid below the detection limit.** 

